

**Bonneville Power Administration
Fish and Wildlife Program FY98 Proposal**

Propagate Native Plant Species for Revegetation and Riparian Restoration Projects

Bonneville project number, if an ongoing project 9085

Business name of agency, institution or organization requesting funding

USFS, Wallowa-Whitman National Forest, La Grande Ranger District

Business acronym (if appropriate) USFS

Proposal contact person or principal investigator:

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Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
J.Herbert Stone FS Nursery	2606 Old Stage Rd.	Central Point, OR 97502	John Scholtes
Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Native Plant Nursery	Dept. Of Nat. Resources, P.O. Box 638, Old Mission Highway	Pendleton, OR 97801	Janet Ebaugh
TriCo Farms	66911 Hunter Rd.	Summerville, OR 97876	Roben Arnoldus
Plantworks Nursery	1805 U Avenue	La Grande, OR 97850	Dick Kenton

Joint Sponsors - Primary Contracts

None

NPPC Program Measure Number(s) which this project addresses.

9085 Propagate Native Plant Species for Revegetation and Riparian Restoration Projects

NPCC Columbia Basin Fish & Wildlife Program Measure 7.0

NMFS Biological Opinion Number(s) which this project addresses.

LRMP Biological Opinion for Snake River Basin ESU Summer Steelhead

LRMP Biological Opinion for Snake River Basin ESU Spring/Summer Chinook Salmon

Other planning document references.

NMFS Proposed Recovery Plan for Snake River Salmon - Ecological Goal 10- Chapter V.

NMFS Proposed Recovery Plan for Snake River Salmon- Tasks to Begin Recovery - Chapter V.

Upper Grande Ronde River Anadromous Fish Habitat Protection, Restoration and Monitoring Plan.

Grande Ronde Model Watershed Program- Operations Action Plan.

Upper Grande Ronde River Basin Watershed Analysis-USFS.

Spring Creek/Five Points Watershed Analysis - USFS.

Catherine Creek Watershed Analysis - USFS.

Subbasin.

Grande Ronde River Subbasin

Short description.

Develop diverse species program for La Grande Ranger District. Collect seed and cuttings from several native plant species, and propagate materials to be used in revegetation and restoration projects. The long term goal is to use locally collected, native plant species as much as possible to meet management objectives. Materials will be made available to other agencies, when possible.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish	X	Construction	X	Watershed
	Resident fish		O & M		Biodiversity/genetics
	Wildlife		Production		Population dynamics
	Oceans/estuaries		Research	+	Ecosystems
	Climate	+	Monitoring/eval.		Flow/survival
	Other		Resource mgmt		Fish disease
			Planning/admin.		Supplementation

_____ Enforcement _____ + _____ Wildlife habitat en-
 _____ Acquisitions _____ hancement/restoration

Other keywords. Riparian vegetation, propagation, restoration, recovery, monitoring

Section 3. Relationships to other Bonneville projects

See Section 7 for comments.

Section 4. Objectives, tasks and schedules

Objectives and tasks

The overall project goal is to provide materials and support services for the collection and propagation of native plant species (including grasses, sedges, forbs and hardwood shrubs); to be used to restore riparian area vegetation and promote the use of native species for other restoration work.

Hypothesis and Assumptions: This is not a research project proposal, therefore a hypotheses and assumptions were not assigned.

Obj 1,2,3	Objective	Task a,b,c	Task
1	Collect appropriate plant material for propagation (seeds or cuttings).	a	Identify species desired and appropriate material and time for collection.
		b	Survey, locate and map collection sites.
		c	Collect propagation material from identified sites, at appropriate time (approximately June through December).
		d	Send collected materials to nursery (Forest Service or Private) for cleaning, seed extraction, and storage).
2	Propagate plant materials to specified size and type.	a	Sow and propagate materials at nursery.
		b	Coordinate with CTUIR Botanist and Nursery Program Manager
		c	Request lift, pack and delivery from nursery.
3	Outplant desired revegetation materials for project, ongoing at	a	Plant 80 (1999) acres riparian habitat using approved techniques

	La Grande Ranger District.		and appropriate plant material.
		b	Plant 10 acres of disturbed areas and seed 10 miles obliterated road, using approved techniques and appropriate plant materials.
4	Provide protection measures	a	Determine need and type of measures for project maintenance
5	Determine growth and survival	a	Survival monitoring, transects and photo points.

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	06/1998	11/2001	25
2	10/1998	04/2002	40
3	04/1999	05/2003	20
4	05/1999	06/2003	5
5	05/2000	10/2004	10

Schedule constraints. Scheduling constraints could be determined by crop failure (seed production) or other weather related delays.

Completion date. 2004

Section 5. Budget

For 1999 we plan on accomplishing 80 acres riparian (hardwood) planting, with an increase to 240 acres for the year 2000 and following.

FY98budget by line item

Item	Note	FY98
Personnel:	Reforestation Specialist	1,900
FS – LAG	Fish Biologist	1,100
	Hydrologist	1,000
	Botanist	5,400
	Technician	1,500
Subcontract	Planting Crew	14,400
Supplies, materials, non-expendable property:	FS-LAG	500

Subcontract	Nursery Costs: Seed extraction & storage	2,500
	Seed purchase for direct seeding (roads)	10,000
	Plant purchase (riparian hardwoods)	1,800
	Misc. (S&H, Boxes)	350
Travel:		
FS-LAG vehicles		500.
FS-LAG	Overhead 15.0%	6,142.
TOTAL		47,092

Outyear costs

Outyear costs	FY1999	FY2000	FY01	FY02	FY03
Total budget	47,092	86,810	85,000	80,000	75,000
O&M as % of total					

Section 6. Abstract

This project will promote the use of adapted, native stock for revegetation and restoration work. Obtaining sufficient supplies of genetically diverse, high quality native seed or vegetative plant materials, which are locally adapted, is not possible at this time.

Availability of native seed or plant material is limited and current nursery stock of native species is not adequate for the needs of the district. It is important to establish a program that supplies a reliable source for desirable materials. This project will facilitate the revegetation needs of the district, promote the use of adapted native vegetation, and help to maintain the native flora and biodiversity of forest, rangeland and aquatic ecosystems.

This project will be invaluable in determining better approaches to riparian and native vegetation restoration projects for riparian areas and aquatic habitat in the Snake River Basin for summer steelhead and spring/summer chinook salmon. This project will be ongoing.

Section 7. Project description

a. Technical and/or scientific background. The overall problem should be clearly identified with background history and scientific literature review, if a research project. Location should be specific, if relevant. Goals and objectives of the 1994 Fish and Wildlife Program (FWP), NMFS Biological Opinion, or other plans in relation to the proposed project should be stated and described in some detail. Indicate whether the project mitigates losses in place, in kind, or if out-of-kind mitigation is being proposed. Show how the proposed work is a logical component of an overall conceptual framework or model that integrated knowledge of the problem. The most significant previous work history related to the project, including work of key project personnel on any past or current work similar to the proposal, should be reviewed. All work should be adequately referenced and listed at the end of this field.

There is a current and growing emphasis on land stewardship and restoration of native ecosystems. This new emphasis on ecosystem management requires the consideration of the use of native plant species for restoring riparian areas, improving wild and domestic animal habitat, providing erosion control, restoring campsites and rehabilitating burned areas. The Forest Service manual, Wallowa-Whitman Forest Plan, and District policy all support the need for re-establishing vegetation, preventing erosion, stabilizing disturbed lands, maintaining or enhancing soil productivity, managing habitat, and maintaining or enhancing ecosystem function.

Revegetation projects, including road obliteration, post-fire rehabilitation, stream and riparian area restoration, etc. are continually being proposed to meet objectives for ecosystem management. However, obtaining sufficient supplies of genetically diverse, high-quality native seed or vegetative plant materials which are locally adapted is not possible at this time. Native plant materials are limited in quantity, and usually are not available from commercial sources; even when available, they are often expensive and grown from stock that is not from our area. Current nursery stock of native species from Forest Service, private, or tribal nurseries is not adequate to meet the needs at the district.

Re-establishment of native riparian vegetation is a high priority for meeting fish habitat and water quality objectives. This project will provide a source of desirable native seed and plant materials for ongoing projects and help to meet current direction. The long-term benefit of incorporating native plants into vegetation projects will be a healthier and more diverse flora, which is faster healing to disturbance. This will then lead to an accelerated recovery of riparian areas and watershed areas, improving water quality and instream habitat.

b. Proposal objectives.

Restoration projects for two (15,000 acres average) subwatersheds per year will be accomplished; including stream systems and associated riparian areas, road construction, and any other disturbance activities. This will involve approximately 80 acres of riparian planting of hardwoods for 1999 (with approximately 240 acres in each of the following

years). Road obliteration and seeding will total 50 acres for the two subwatersheds. Revegetation associated with general disturbance activities (including recreation sites, wildlife enhancement projects, and fire rehabilitation) will average 150 acres per year.

c. Rationale and significance to Regional Programs.

Use of native vegetation will help maintain biodiversity, and re-establish vegetation which will promote a better landscape and be more resilient to disturbance. Development of a long-term, integrated program to facilitate revegetation and restoration projects will be an important part of forest health restoration, ecosystem management, and recovery efforts for Snake River T&E listed fish species (Spring Chinook Salmon and Summer Steelhead) and (proposed) Bull Trout habitat in the Blue Mountains.

d. Project history

Although the diverse species program has had limited implementation, planning time-frames, propagation schedules, out-year budgets and uncertain funding has made it difficult to coordinate and finance the work. The development of a long-term strategy to facilitate an integrated program which will ultimately make seed and plant materials readily available at reasonable prices has not yet occurred.

e. Methods.

We have assessed future needs for various species and have identified which geographic areas (watersheds and/or subwatersheds) to focus our efforts on. These will include those riparian areas and wet meadow habitats which have been identified as being in poor condition (based on existing stream and riparian habitat information at the La Grande Ranger District), and do not have an adequate source of native material on site or in system to reestablish itself.

In addition, the road system has been assessed through Access and Travel Management, and draw-bottom roads are a priority for obliteration. The prioritized roads in the Upper Grande Ronde, Spring Creek/Five Points, Indian/Clark Creek, and Catherine Creek Watersheds have been obliterated and will be seeded, or planted with hardwoods.

We have identified two subwatersheds in the Upper Grande Ronde, on which to focus the native seed collection and propagation efforts. It encompasses 80 acres of riparian hardwood planting and 10 miles of road seeding. We have identified potential plants and sites for some seed and cutting collection, initially targeting approximately 10 species for collecting and propagation. These include: *Acer glabrum* (Rocky Mtn. Maple), *Alnus incana* (thin-leaf alder), *Crataegus douglasii* (black hawthorne), *Cornus stolonifera* (dogwood), *Salix* (willow) species, *Carex aquatilis* (water sedge), *Agropyron spicatum* (bluebunch wheatgrass), *Festuca idahoensis* (Idaho fescue), *Danthonia californica* (California oatgrass), *Elymus glaucus* (blue wild-rye). Collection of the propagation material from these previously identified sites will take place at the appropriate time for that particular species (June through November), utilizing pre-determined methods as described in the Native Seed Collection Guide for Ecosystem Restoration, developed for the Wallowa-Whitman National Forest in August of 1993. This includes selection

criteria for parent plant, plant material movement guidelines, and procedures for native seed collecting and transport.

The actual propagation and growth of collected materials will take place in forest service, private or commercial nurseries, utilizing approved techniques and meeting specifications to assure quality products.

The typical timeframe for a specific project is 1-3 years, from identifying restoration sites and parent plants for collection, to out-planting propagated materials purchased from the nursery. The target date to begin seed collection is June 1998 and will be conducted over the following three years. After seed has been extracted and cleaned, it can either be stored for future use or propagated. Propagation and production of plant materials (from seed and cuttings) will take place at the nurseries over beginning the fall of 1998, and continue over the fall and springs of 1999, 2000, 2001 and 2002. Some revegetation material of local origin is available for purchase and planting during the spring of 1998. This material is from previously collected cuttings and seed stock. Additional collections, purchases and plantings will occur during 1999 and 2000 utilizing materials which have been collected and propagated under this project.

Monitoring will be conducted at years 1, 3, 5 and 10 for survival, growth and shrub biomass, utilizing standard practices. At each planted site, photopoints will be established to monitor long-term recovery trend and analysis. The monitoring will be used to adjust planting schedules, species and micro-site location, and protection measures for out-year planning.

f. Facilities and equipment.

J. Herbert Stone Nursery @ Rogue River National Forest
CTUIR Native Plant Nursery
TriCo Farms
The Plantworks Nursery

Section 8. Relationships to other projects

Meadow Creek Instream Structure and Riparian Recovery research/USDA Forest Service, PNW Research Station and Wallowa-Whitman National Forest. This project has been funded by the USFS and the subject proposal will continue the investigation in a cooperative manner. Research results will be used in an adaptive manner to improve the riparian restoration implementation.

Geomorphic, hydrologic and ecological connectivity in Columbia River watersheds: implications for endangered salmonids. The US Environmental Protection Agency and the National Science Foundation. This is a companion project located on the John Day and Upper Grande Ronde Basins. Research results will be used in an adaptive manner to improve the riparian restoration implementation.

Section 9. Key personnel

Penny D. Hall, District Botanist, La Grande Ranger District; 3502 Hwy 30, La Grande, OR 97850.

Plant identification and collection for riparian plant propagation, survival and growth monitoring

Paul L. Boehne, Fisheries and Watershed Staff, La Grande Ranger District; 3502 Hwy 30, La Grande, OR 97850.

Fish habitat relationships, inchannel and riparian restoration and aquatic ecosystems interactions

Kari Ann Grover-Weir, Hydrologist, La Grande Ranger District; 3502 Hwy 30, La Grande, OR 97850.

Riparian restoration, riparian plant propagation, riparian/channel responses to restoration

Resumes and curriculum vitae will be supplied for key personnel at a later date.

Section 10. Information/technology transfer

How will technology or technical information obtained from the project be distributed or otherwise implemented? Methods can include publication, holding of workshops, incorporation in agency standards or facilities, and commercialization.

Technology transfer will take many forms including but not limited to graduate theses, journal articles, general technical reports, symposium proceedings and project reports to BPA and NWPPC and USDA Forest Service for adding to LRMP revisions and NMFS for Recovery Plan assessments.